**Appendix 1**

**WILDLAND FIRE ADVISORY COUNCIL**
**EQUIPMENT LISTING**
**STRUCTURE EQUIPMENT**

**Ash Fork Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 1 | 6 | 500 | 750 | Yes |
| Engine | Engine 2 | 5 | 1000 | 750 | Yes |

**Junipine Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Water Tender | Truck 1 | 3 | 1000 | 50 | No |
| Engine | Truck 2 | 2 | 400 | 750 | No |
| Water Trailer | Trailer 1 | 3 | 1000 | 50 | No |

**Sherwood Forest Estates Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 1 | 5 | 600 | 700 | Yes |
| Pumper | Engine 2 | 3 | 1000 | 125 | Yes |
| Engine | Engine 3 | 1 | 500 | 1000 | Yes |
| Water Tender | Tender 4 | 3 | 1500 | 400 | Yes |
| Water Tender | Tender 5 | 3 | 1500 | 200 | Yes |

**Kaibab Estates West Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 1 | 6 | 500 | 750 | Yes |

**Parks-Bellemont Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 1 | 1 | 1000 | 1250 (CAFS) | Yes |
| Engine | Engine 2 | 1 | 3500 | 1500 | Yes |

**Valle-Wood Volunteer Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 1 | | 400 | 1000 | Yes |
| Engine | Engine 2 | 3 | 300 | 250 | |

**WILDLAND FIRE ADVISORY COUNCIL**
**EQUIPMENT LISTING**
**STRUCTURE EQUIPMENT**
**(continued)**

**Williams Volunteer Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 3 | | 300 | 1000 | Yes |
| Engine | Engine 5 | | 500 | 1500 | Yes |
| Engine | Engine 6 | | 500 | 1500 | Yes |
| Engine | Engine 8 | | 1000 | 1250 | Yes |

**Paulden Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 1 | | 500 | 1500 | |
| Water Tender | Tender 1 | | 1200 | N/A | |

**WILDLAND FIRE ADVISORY COUNCIL**
**EQUIPMENT LISTING**
**WILDFIRE EQUIPMENT**

**Kaibab National Forest**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 12 | 3 | 600 | 350 | Yes |
| Engine | Engine 14 | 3 | 600 | 350 | Yes |
| Engine | Engine 11 | 6 | 200 | 50 | Yes |
| Engine | Engine 13 | 6 | 200 | 50 | Yes |
| Engine | Engine 41 | 6 | 200 | 50 | Yes |
| Engine | Engine 42 | 6 | 200 | 50 | Yes |
| Dozer | Doz. 11 | 3 | N/A | N/A | Yes |
| Dozer | Doz. 12 | 3 | N/A | N/A | Yes |
| Prevention | Patrol 11 | 7 | 125 | 35 | Yes |
| Prevention | Patrol 12 | 7 | 125 | 35 | Yes |
| Prevention | Patrol 41 | 7 | 125 | 35 | Yes |
| Prevention | Patrol 42 | 7 | 125 | 35 | Yes |
| Helicopter | Hel. 336 | 3 | 80 Bucket | N/A | Yes |

**WILDLAND FIRE ADVISORY COUNCIL**
**EQUIPMENT LISTING**
**WILDFIRE EQUIPMENT**
**(continued)**

**Ash Fork Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 3 | 6 | 250 | 500 | Yes |

**Valle-Wood Volunteer Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Brush Truck | Brush Truck 1 | 6 | 200 | 60 | No |
| Brush Truck | | 3 | 300 | 250 | Yes |

**Williams Volunteer Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 2 | | 1000 | 750 | Yes |
| Engine | Truck 4 | 6 | 300 | 500 | Yes |
| Water Tender | Tanker 1 | 3 | 2,000 | 250 | Yes |

**Parks-Bellemont Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Brush Truck | Brush 1 | 6 | 210 | 50 | Yes |
| Brush Truck | Brush 2 | 6 | 300 | 50 | Yes |
| Brush Truck | Brush 3 | 2 | 500 | 500 | Yes |
| Brush Truck | Brush 4 | 2 | 750 | 750 | Yes |
| Water Tender | | 2 | 1500 | 100 | Yes |
| Water Tender | | 2 | 4000 | 750 | Yes |

**Sherwood Forest Estates Fire Department**

| Resource | Call Sign | ICS Type | H20 Capacity | GPM | Mutual Aid Ch. |
|---|---|---|---|---|---|
| Engine | Engine 1 | 5 | 600 | 700 | Yes |
| Pumper | Engine 2 | 3 | 1000 | 125 | Yes |
| Engine | Engine 3 | 1 | 500 | 1000 | Yes |
| Water Tender | Tender 4 | 3 | 1500 | 400 | Yes |
| Water Tender | Tender 5 | 3 | 1500 | 200 | Yes |

**Appendix 2**

## TABLES OF MAP INFORMATION

The following tables describe the acreages and associated information pertinent to maps used in the CWPP.

### COMMUNITY BASE MAP

| Land Owner | Acres | % of Total |
|---|---|---|
| Kaibab National Forest | 294,258 | 90.2% |
| Private land | 29,776 | 9.1% |
| Coconino National Forest | 1,516 | .5% |
| State land | 650 | .2% |
| Total | 326,200 | |

### DOMINANT OVERSTORY VEGETATION MAP

| Vegetation | Acres | % of Total |
|---|---|---|
| Mixed Conifer | 13,631 | 4.2% |
| Ponderosa Pine | 221,550 | 67.9% |
| Ponderosa Pine grasslands | 72,304 | 22.2% |
| Pinyon juniper | 16,998 | 5.2% |
| Pinyon juniper grasslands | 1,381 | .4% |
| Water | 336 | .1% |
| Total | 326,200 | |

### CROWN FIRE RISK MAP

| Adjective Rating | Acres | % of Total |
|---|---|---|
| Extreme | 17,349 | 5.3% |
| High | 172,276 | 52.8% |
| Moderate | 67,586 | 20.7% |
| Low | 37,047 | 11.4% |
| Private | 29,776 | 9.1% |
| Coconino National Forest | 1,516 | .5% |
| State land | 650 | .2% |
| Total | 326,200 | |

**WILLIAMS RANGER DISTICT 20-YEAR FIRE OCCURRENCE (1983-2002)**

| | Total Fires | Total Acres | Yearly Average Fires | Yearly Average Acres |
|---|---|---|---|---|
| Lightning cause | 1,422 | 15,255 | 71 | 763 |
| Human cause | 488 | 2,786 | 24 | 139 |
| Total | 1,910 | 18,041 | 95 | 902 |

**DEVELOPMENT RISK MAP**

| Land Ownership | Acres | % of Total |
|---|---|---|
| Kaibab National Forest undeveloped land | 292,946 | 89.8% |
| Kaibab National Forest developed land | 1,312 | .4% |
| Developed private land | 27,153 | 8.3% |
| Undeveloped private land | 2,623 | .8% |
| Coconino National Forest | 1,516 | .5% |
| State land | 650 | .2% |
| Total | 326,200 | |

**CUMMULATIVE RISK MAP***

| Adjective Rating | Acres | % of Total |
|---|---|---|
| Extreme | 44,502 | 13.6% |
| High | 172,276 | 52.8% |
| Moderate | 70,209 | 21.5% |
| Low | 37,047 | 11.4% |
| Coconino National Forest | 1,516 | .5% |
| State land | 650 | .2% |
| Total | 326,200 | |

*Private land acres included in this map have not been analyzed to determine crown fire risk.

**PRIORITY TREATMENT AREA MAP**

| | High Priority | Medium Priority | Low Priority |
|---|---|---|---|
| Kaibab National Forest | 140,530 | 74,157 | 79,571 |
| State Land | 376 | 166 | 108 |
| Private Land | 17,774 | 3,029 | 8,973 |
| Total | 158,680 | 77,352 | 88,652 |

**CROWN FIRE RISK ASSESSMENT AFTER SIMULATED THINNING TO 40 BA, PILE, AND BURN**

| Adjective Rating | Acres | % of Total |
|---|---|---|
| Extreme | 9,338 | 2.9% |
| High | 27,303 | 8.4% |
| Moderate | 219,060 | 67.1% |
| Low | 38,557 | 11.8% |
| Private | 29,776 | 9.1% |
| Coconino National Forest | 1,516 | .5% |
| State land | 650 | .2% |
| Total | 326,200 | |

**COMPARISON TABLE OF CROWN FIRE RISK BETWEEN SIMULATED TREATMENT & CURRENT CONDITIONS**

| Adjective Rating | Current Acres | Simulated Treatment Acres | Acreage Difference |
|---|---|---|---|
| Extreme | 17,349 | 9,338 | -8,011 |
| High | 172,276 | 27,303 | -144,973 |
| Moderate | 67,586 | 219,060 | +151,474 |
| Low | 37,047 | 38,557 | +1,510 |
| Private | 29,776 | 29,776 | 0 |
| Coconino National Forest | 1,516 | 1,516 | 0 |
| State Land | 650 | 650 | 0 |
| Total | 326,200 | | |

## Appendix 3

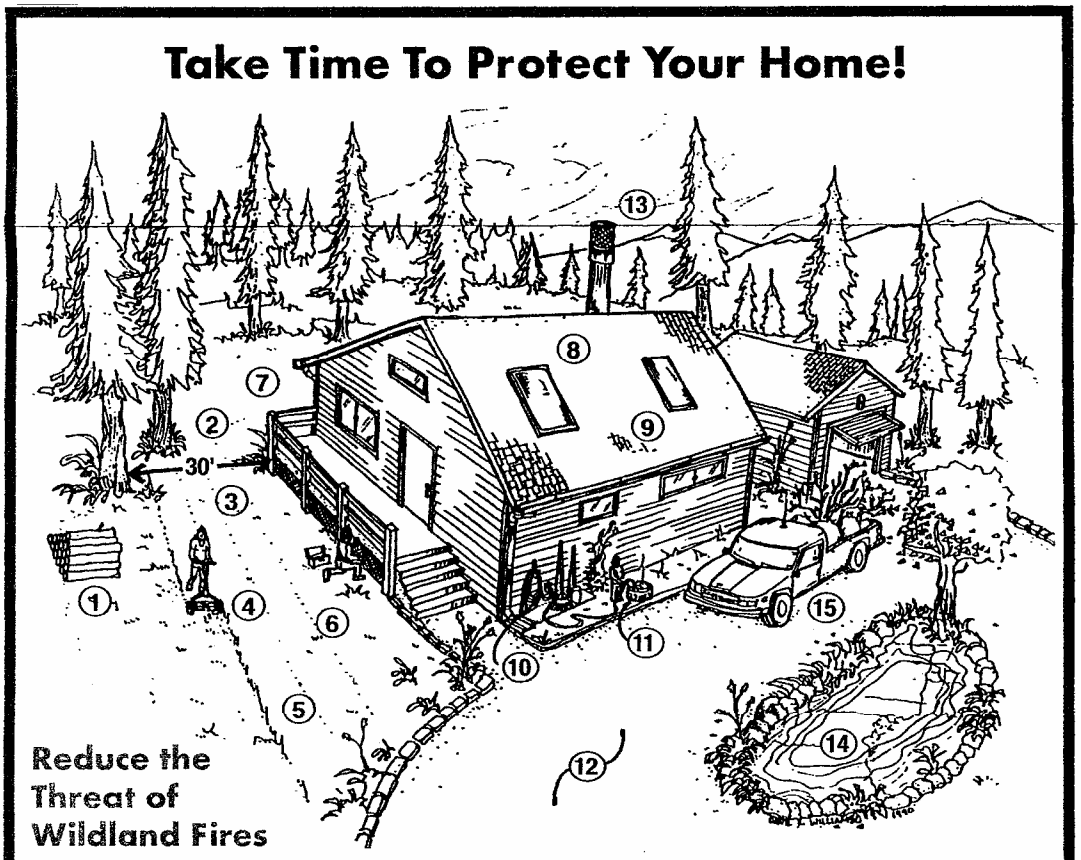
### FUELS TREATMENT COST ESTIMATION CALCULATIONS

| **High Priority Area** | | **KNF Acres** | **PVT Acres** | **State Acres** | **Total Acres** |
|---|---|---|---|---|---|
| **90% of Acres Treated** | Total Acres | 140,530 | 17,774 | 376 | 158,680 |
| | 90% of Acres | 126,477 | 15,997 | 338 | 142,812 |
| | **Treatment Costs** | | | | |
| Heavy Thin 0-16" | $450 | | | | |
| Piling | $250 | | | | |
| Pile Burning | $50 | | | | |
| Broadcast Burning | $150 | | | | |
| Plan & Monitor | $30 | | | | |
| Total | $930 | | | | |
| | | | | | |
| Cost for 90% of area | | $117,623,610 | $14,876,838 | $314,712 | $132,815,160 |
| | | | | | |
| | | | | | |
| **Medium Priority Area** | | **KNF Acres** | **PVT Acres** | **State Acres** | **Total Acres** |
| **80% of Acres Treated** | Total Acres | 74,157 | 3,029 | 166 | 77,352 |
| | 80% of Acres | 59,326 | 2,423 | 133 | 61,882 |
| | **Treatment Costs** | | | | |
| Intermediate Thin 0-16" | $350 | | | | |
| Piling | $215 | | | | |
| Pile Burning | $50 | | | | |
| Broadcast Burning | $150 | | | | |
| Plan & Monitor | $30 | | | | |
| Total | $795 | | | | |
| | | | | | |
| Cost for 80% of area | | $47,163,852 | $1,926,444 | $105,576 | $49,195,872 |
| | | | | | |
| | | | | | |
| **Low Priority Area** | | **KNF Acres** | **PVT Acres** | **State Acres** | **Total Acres** |
| **50% of Acres Treated** | Total Acres | 79,571 | 8,973 | 108 | 88,652 |
| | 50% of Acres | 39,786 | 4,487 | 54 | 44,326 |
| | **Treatment Costs** | | | | |
| Light Thin 0-16" | $250 | | | | |
| Broadcast Burning | $150 | | | | |
| Plan & Monitor | $30 | | | | |
| Total | $430 | | | | |
| | | | | | |
| Cost for 50% of area | | $17,107,765 | $1,929,195 | $23,220 | $19,060,180 |
| | | | | | |
| **Total Cost by Agency** | | **$181,895,227** | **$18,732,477** | **$443,508** | **$201,071,212** |
| **Treated Acres** | | **225,588** | **22,906** | **525** | **249,020** |
| | | | | | |
| Piling Cost Figures | Hand Pile | Dozer Pile | Average Used | | |
| Heavy Thin 0-16" | $300 | $200 | $250 | | |
| Intermediate Thin 0-16" | $250 | $180 | $215 | | |

ASSUMPTION IN COST ESTIMATES: Required thinning of trees larger than 16" DBH will likely be accomplished through commercial means. Planning and monitoring cost estimates are for large scale Forest Service projects. These costs generally are much higher per acre for small scale work on state and private lands.

**Appendix 4**

## GREATER WILLIAMS AREA CWPP FIREWISE TIPS




1. Stack firewood away from the house.
2. Thin and prune trees and shrubs.
3. Maintain a circle of safety—at least 30 feet or greater on slopes.
4. Keep grass and weeds mowed.
5. Keep the immediate area clear of debris.
6. Enclose openings such as porches and foundations.
7. Remove tree limbs that hang over structures.
8. Replace or treat wood shake roofs with fire retardant materials.
9. Keep roofs and gutters clear of debris.
10. Keep your fire extinguisher charged and available, and a hose near outdoor faucets.
11. Dispose of ashes properly.
12. Provide adequate access for emergency vehicles.
13. Install spark arrestors on chimneys.
14. Provide an adequate outdoor water supply.
15. Dispose of trash legally—do not burn it.

**Firewise Construction:**

- Use construction materials that are fire-resistant or non-combustible whenever possible.
- Use shingles such as Class-A asphalt, slate or clay tile, metal, or cement and concrete products for roof construction.
- Construct a fire-resistant sub-roof for added protection.
- Use fire-resistant materials such as stucco or masonry for exterior walls. These products are much better than vinyl which can soften and melt.
- Consider both size and materials for windows; smaller panes hold up better in their frames than larger ones; double pane glass and tempered glass are more effective than single pane glass; plastic skylights can melt.
- Prevent sparks from entering your home through vents, by covering exterior attic and foundation vents with wire mesh no larger than 1/8 of an inch.
- Keep your gutters, eaves, and roof clear of leaves and other debris.
- Clear dead wood and dense vegetation within at least 30 feet from your house, and move firewood away from your house or attachments like fences or decks.
- If you wish to attach an all-wood fence to your home, use masonry or metal as a protective barrier between the fence and house.
- Use non-flammable metal when constructing a trellis and cover with high moisture, fire-resistant vegetation.
- Prevent combustible materials and debris from accumulating beneath patio deck or elevated porches; screen underneath or box in areas below the deck or porch with wire mesh no larger than 1/8 of an inch.

**Firewise Landscaping:**

- Within the defensible space, a well irrigated area that encircles your home for at least 30 feet on all sides, plants should be limited to carefully spaced fire resistant tree and shrub species. Keep lawns and dry weeds mowed. Limb trees up at least 10 feet.
- From the 30 foot defensible space out to 100 feet, use plants that are low growing, well irrigated, and with ample openings. Remember plant spacing to keep ladder fuels from being placed near taller vegetation and trees.
- Past 100 feet can be a natural area. Thin selectively and remove highly flammable vegetation.
- Follow the Lean, Clean, and Green guidelines.

  Lean – Prune shrubs and cut back tree branches, especially within 15 feet of your chimney.

  Clean – Remove all dead plant material from around your home; this includes dead leaves, dry vegetation, and even stacked firewood.

  Green – Plant fire-resistant vegetation that is healthy and green throughout the fire season.

**Firewise Home Inspection Contacts:**

- Arizona State Land Department 928-774-1425
- Williams Ranger District – Forest Service 928-635-5600
- City of Williams Fire Department 928-635-4451
- Parks-Bellemont Fire Department 928-635-5311
- Sherwood Forest Estates Fire Department 928-635-9837

For additional information and firewise tips, visit www.firewise.org.